Remarks begin on page 5 of this paper.

Amendments to the Claims

Please rewrite Claim 1 as follows:

1. (Currently Amended) A spin-valve magnetoresistive sensor comprising, on a substrate, an antiferromagnetic layer; a pinned magnetic layer formed in contact with said antiferromagnetic layer and having a magnetization direction made stationary under an exchange anisotropic magnetic field generated by interaction with said antiferromagnetic layer; a non-magnetic electrically conductive layer formed between a free magnetic layer and said pinned magnetic layer; soft magnetic layers that are arranged on said free magnetic layer having a spacing between said soft magnetic layers corresponding to a track width ~~between said soft magnetic layers and that~~ defined at a level at which said soft magnetic layers fill recesses in the free magnetic layer ~~on both sides of an area corresponding to the track width~~; bias layers formed on said soft magnetic layers to uniformly arrange a magnetization direction of said free magnetic layer in a direction crossing the magnetization direction of said pinned magnetic layer; and electrically conductive layers formed on the bias layers to apply a detection electric current to said free magnetic layer,

wherein a thickness of said soft magnetic layers exceeds a depth of the recesses, and said antiferromagnetic layer and said bias layer each comprising an alloy containing Mn and at least one element selected from a group consisting of Pt, Pd, Rh, Ru, Ir, Os, Au, Ag, Cr, Ni, Ne, Ar, Xe, and Kr~~, and Mn~~.

2. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein at least one of said pinned magnetic layer and said free magnetic layer is divided into two layers with a non-magnetic intermediate layer interposed between the two layers, and the divided two layers are held in a ferrimagnetic state in which the divided two layers are magnetized in directions 180° different from each other.

3. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said antiferromagnetic layer comprises an alloy having the following composition formula;$X_mMn_{100-m}$where X is at least one element selected from a group consisting of Pt, Pd, Rh, Ru, Ir and Os, and a composition ratio *m* satisfies 48 atom % ≤ m ≤ 60 atom %.

4. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said bias layer comprises an alloy having the following composition formula;$X_mMn_{100-m}$where X is at least one element selected from a group consisting of Pt, Pd, Rh, Ru, Ir and Os, and a composition ratio *m* satisfies 48 atom % ≤ m ≤ 60 atom %.

5. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said antiferromagnetic layer comprises an alloy having the following composition formula;$Pt_mMn_{100-m-n}D_n$where D is at least one element selected from a group consisting of Pd, Rh, Ru, Ir and Os, and composition ratios *m, n* satisfy 48 atom % ≤ m + n ≤ 60 atom % and 0.2 atom % ≤ n ≤ 40 atom %.

6. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said bias layer comprises an alloy having the following composition formula;$Pt_mMn_{100-m-n}D_n$where D is at least one element selected from a group consisting of Pd, Rh, Ru, Ir and Os, and composition ratios *m, n* satisfy 52 atom % ≤ m + n ≤ 60 atom % and 0.2 atom % ≤ n ≤ 40 atom %.

7. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said soft magnetic layer comprises a NiFe alloy.

8. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein recesses are formed in said free magnetic layer on both sides of an area corresponding to the track width, said soft magnetic layers are formed to fill said recesses and are directly joined to said free magnetic layer through bottom surfaces of said recesses, and said bias layers and said electrically conductive layers are successively formed on said soft magnetic layers.

9. (Previously Amended) A spin-valve magnetoresistive sensor according to Claim 1, wherein said free magnetic layer is divided into a first free magnetic layer disposed farther away from the pinned magnetic layer and a second free magnetic layer disposed closer to the pinned magnetic layer, a non-magnetic intermediate layer is interposed between the first free magnetic layer and the second free magnetic layer, a magnetic film thickness of said first free magnetic layer is smaller than a magnetic film thickness of said second free magnetic layer.

Claims 10-14 (Withdrawn)